CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas W. Elmendorf, Director

August 11, 2011

Honorable Tim Huelskamp
U.S. House of Representatives
Washington, DC 20515

Dear Congressman:

I am writing in response to your letter inquiring about the effects of government spending on economic growth. Changes in government spending can affect the economy in two different ways: in the short term, by changing *demand* for goods and services and over the long run, by changing the *potential supply* of goods and services.

How Federal Spending Affects Aggregate Demand for Goods and Services

As the recent severe recession and slow recovery are showing, economic activity can deviate for substantial periods from its potential level in response to changes in aggregate demand (the total purchases of a country's output of goods and services by consumers, businesses, governments, and foreigners). When demand for goods and services falls short of the economy's ability to produce them, as is the case currently, increasing government spending can increase aggregate demand and thereby narrow the gap between the economy's actual and potential levels of output.

Most types of government spending have this short-run effect on demand. Government purchases of goods and services add to aggregate demand directly, and government transfers to people (such as unemployment insurance payments or Social Security benefits) or to states and localities (such as support for secondary education) tend to increase the amount of goods and services purchased by the recipients. The magnitude of the effect on demand depends on the details of the spending policies and the economic situation.[1] For example, when the Federal Reserve's ability to lower short-run interest rates is constrained because those rates are already near zero, as they are currently, the short-run effects of changes in government spending on output tend to be larger than usual.

[1] See Congressional Budget Office, *Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from January 2011 Through March 2011* (May 2011) and Statement of Douglas W. Elmendorf, Director, Congressional Budget Office, before the Senate Committee on the Budget, *The Economic Outlook and Fiscal Policy Choices* (September 28, 2010).

Nevertheless, changes in government purchases and transfers create demand-side effects that are usually only temporary: They raise or lower output relative to what it would be otherwise only for a while because, over time, stabilizing forces in the economy (such as the responses of prices and interest rates and actions by the Federal Reserve) tend to move output back toward its potential.

A recent analysis by the Congressional Budget Office (CBO) of an illustrative deficit reduction plan (without any particular changes in spending or revenues specified) provides a very rough indication of the magnitude of the economic effects of cuts in government spending under current economic conditions.[2] In that analysis, CBO estimated the short-term and longer-term effects of reducing the primary deficit (the budget deficit excluding net interest) by $100 billion in 2012 and by amounts increasing gradually to $300 billion by 2021. CBO estimated that the illustrative plan would decrease real (inflation-adjusted) gross national product (GNP) in 2012, 2013, and 2014 by amounts ranging from roughly 0.1 percent to 0.6 percent depending on the year and the assumptions used.[3] A policy that had a different amount of cumulative reduction in primary deficits but that reduced them on the same gradual time path as that illustrative plan would have macroeconomic effects that, in percentage terms, were about the same. Thus, for example, a reduction in primary deficits that followed the same gradual time path but was twice as large would produce macroeconomic effects that were roughly twice as large. Again, as noted, the precise magnitude of the effects of a specific deficit reduction plan would depend on the specific policies it included. In particular, a plan of the same size as the illustrative plan but based only on reductions in government purchases of goods and services could reduce GNP by substantially more in the short run.

How Federal Spending Affects the Nation's Potential Output

Over the long run, the nation's potential to produce goods and services depends on the size and quality of its labor force, on the stock of productive capital (such as factories, vehicles, and computers), and on the efficiency with which labor and capital are used to produce goods and services.[4] Changes in those determinants of

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[2] See Congressional Budget Office, *The Macroeconomic and Budgetary Effects of an Illustrative Policy for Reducing the Federal Budget Deficit* (July 2011).

[3] CBO's analysis considered a range of possible short-term effects on output. The medium-sized response reflected the assumption that each one dollar reduction in the deficit would cause economic output to decline by a dollar in the short term, excluding the effects from changes in interest rates. At one end of the range, each one-dollar cut in the deficit was assumed to cause cumulative economic output to decline by $0.60 over several quarters. At the opposite end of the range, each one-dollar cut in the deficit was assumed to cause economic output to decline by a cumulative $1.40. The dollar-for-dollar response lies within the ranges of estimated effects on economic output for many policies examined in CBO's analysis of the macroeconomic effects of the American Recovery and Reinvestment Act of 2009 (ARRA). See Congressional Budget Office, *Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from January 2011 Through March 2011* (May 2011), Table 2.

[4] Efficiency in turn depends on such factors such as production technology, the way businesses are organized, and the regulatory environment.

potential output can have a lasting influence on the economy's ability to supply goods and services.

Therefore, the federal government's budgetary policies affect potential output primarily by affecting the amount of national saving and the incentives for individuals and businesses to work, save, and invest. The nation's capital stock depends both on public saving (the surpluses, if any, of state and local governments and the federal government) and on private saving (by households and businesses). A federal deficit represents a reduction in public saving and, therefore, in national saving. An overall decline in national saving reduces the capital stock owned by U.S. citizens over time through a decrease in domestic investment, an increase in net borrowing from abroad, or both.

Taking those effects into account, CBO estimated that the illustrative policy of deficit reduction described above would increase output and income in the longer run by boosting national saving and investment. At the turn of the decade, from 2019 through 2021, GNP would increase by roughly 0.5 percent to 1.4 percent, CBO estimated, again depending on the year and the assumptions used.[5]

Specific spending policies can also influence the economy's potential output in other ways. Some types of spending, such as funding for improvements to roads and highways, may add to the economy's potential output in much the same way that private capital investment does. Other policies, such as funding for grants to increase access to college education, may raise long-term productivity by enhancing people's skills. The positive longer-term impact of deficit reduction on GNP would be smaller if the policies that reduced deficits included cuts in productive government investments.

Even among types of federal spending that contribute to potential output, the effects of different policies can vary greatly. For example, spending for basic research and education may affect output only after a number of years, but once those investments begin to boost output, they may pay off over more years than would the average investment in physical capital (in economic terms, they may have a low rate of depreciation). Moreover, even within a specific program, how those funds are allocated also matters a great deal. Although some specific government investments in a particular category may be as productive as private investment, other projects probably fall short of that benchmark.

On a more fundamental level, the government provides a crucial role in maintaining the legal and institutional framework within which the economy operates. Government spending on the justice system, for example, supports the

[5] To illustrate a range of possible effects, CBO assumed that each dollar of deficit reduction would increase domestic investment by 20, 36, or 50 cents (reflecting different assumptions about the effects of deficits on both national saving and net borrowing from abroad).

smooth functioning of the economy by protecting private property rights and enforcing contracts.

I hope this information is helpful to you. Please let me know if you have any further questions. The staff contact for this analysis is Benjamin Page.

Sincerely,

Douglas W. Elmendorf

Douglas W. Elmendorf
Director

cc: Honorable Paul Ryan
Chairman
House Committee on the Budget

Honorable Chris Van Hollen
Ranking Member
House Committee on the Budget